

CLAIMS

What is claimed is:

- Sub AI
1. A method for managing network resources, the method comprising the steps of:
 - a) allocating on a server at least one server resource to a client;
 - b) monitoring activity of a user by said client to detect a change in the level of activity;
 - c) transmitting to said server from said client a notification of change of activity; and
 - d) managing at least one said allocated resource on said server in response to said notification.
 2. The method of claim 1 wherein said notification of change of activity is in response to user inactivity.
 3. The method of claim 2 further comprising the step of storing the state of the at least one allocated resource such that resumption occurs at substantially said same state in response to a subsequent notification of change of activity.

1 4. The method of claim 2 further comprising the steps of:

2 e) terminating transmission of output data to said client associated
3 with an application executing on said server in response to said notification;

4 f) storing said output data in a storage area following said
5 notification; and

6 g) transmitting said stored output data to said client in response to a
7 subsequent notification of change of activity.

1 5. The method of claim 2 further comprising the step of displaying a predefined
2 display on said client following detection of a change in the level of user activity.

1 6. The method of claim 5 further comprising the step of transmitting from said
2 server to said client said predefined display.

1 7. The method of claim 2 wherein step (d) comprises reducing said at least one
2 allocated resource on said server in response to said notification.

1 8. The method of claim 7 further comprising the steps of:

2 e) transmitting to said server from said client a second notification of
3 change of activity; and

4 f) resuming said at least one allocated resource on said server in
5 response to said second notification of change of activity.

1 9. The method of claim 7 further comprising the step of reducing at least one
2 allocated resource in the network communication channel associated with
3 maintaining communication between said server and said client.

1 10. The method of claim 2 wherein step (d) comprises reducing said at least one
2 allocated resource to a predetermined level such that when the user resumes activity,
3 resumption of said pre-reduced allocated resource is substantially transparent to said user.

1 11. The method of claim 2 wherein step (d) comprises the steps of:

2 (d-a) terminating communication with said client; and

3 (d-b) reducing said at least one allocated resource associated with
4 maintaining communication with said client.

1 12. The method of claim 11 further comprising the steps of:

2 e) re-establishing said communication between said client and said
3 server; and

4 f) transmitting to said server from said client a second notification of
5 change of activity.

1 13. The method of claim 12 further comprising the step of initiating, by said client,
2 the re-establishment of said communication between said client and said server.

- 1 14. A system for managing network resources, the system comprising:
2 a server comprising:
3 a resource manager; and
4 a server communication link in communication with said resource
5 manager; and
6 a client in communication with said server, said client comprising:
7 an activity monitor; and
8 a client communication link in communication with said activity monitor,
9 wherein said client activity monitor detects a level of activity of a user on
10 said client and in response to a change in said level of activity transmits over said
11 communication link to said server a notification of change of activity; and
12 wherein said server resource manager, in response to said notification,
13 manages said at least one server resource associated with said client.
- 1 15. The system of claim 14 wherein said notification of change of activity represents
2 user inactivity.
- 1 16. The system of claim 14 wherein said server resource manager, in response to said
2 notification, reduces at least one server resource associated with said client.

- 1 17. The system of claim 14 wherein said server further comprises a server first
2 storage buffer in communication with said resource manager,
3 wherein said server stores output data generated by an application in said
4 first storage buffer in response to said notification.
- 1 18. The system of claim 17 wherein said server transmits said output data stored in
2 said first storage buffer to said client in response to a subsequent notification of
3 change of activity.
- 1 19. The system of claim 14 wherein said server further comprises:
2 a server second storage buffer in communication with said resource
3 manager,
4 wherein said server stores the state of said at least one allocated resource
5 when said notification is received, for resumption at substantially same said state
6 in response to a subsequent notification of change of activity.
- 1 20. The system of claim 15 wherein said server further comprises:
2 a server display generator in communication with said resource manager,
3 wherein said display generator produces a display which said server
4 transmits to said client and wherein said client displays said display following
5 detection of a change in the level of activity.
- 1 21. The system of claim 15 wherein said client communication link initiates re-
2 establishing communication with said server in response to said notification.

- 1 22. A client for monitoring user activity, the client comprising:
2 an activity monitor; and
3 a communication link in communication with said activity monitor,
4 wherein said client activity monitor detects a level of activity of a user on
5 said client and in response to a change in said detection transmits over said
6 communication link to an external server a notification of change of activity.
- 1 23. The client of claim 22 wherein said notification of change of activity represents
2 user inactivity.
- 1 24. The client of claim 22 wherein said client communication link initiates re-
2 establishing communication with said server in response to said notification.
- 1 25. The client of claim 22 wherein said activity monitor further comprises:
2 a notification generator;
3 an inactivity timer in communication with said notification generator; and
4 a user detection I/O in communication with said inactivity timer and said
5 notification generator,
6 wherein said user detection I/O detects lack of activity of a user on said
7 client and transmits detection to said inactivity timer and in response to this
8 detection said inactivity timer starts counting until it is either reset by detection of
9 activity by said user I/O or counts to a predetermined value; and wherein said
10 notification generator, in response to said inactivity timer reaching said

11 predetermined value transmits over the communication link to an external server a
12 notification of change of activity.

1 26. The client of claim 25 wherein subsequent to said inactivity timer reaching said
2 predetermined value, said user detection I/O detects resumption of activity of a
3 user and in response to this detection, said notification generator transmits over
4 the communication link to an external server a notification of change of activity.

1 27. A server for managing resources allocated to an external client, the server
2 comprising:
3 a resource manager; and
4 a communication link in communication with said resource
5 manager,
6 wherein said server resource manager, in response to a notification of
7 change of activity from an external client received over the communication link,
8 manages said at least one server resource associated with said external client.

1 28. The server of claim 27 wherein said notification of change of activity represents
2 user inactivity.

1 29. The server of claim 27 wherein said server resource manager, in response to said
2 notification received over the communication link, reduces at least one server
3 resource associated with said external client.

- 1 30. The server of claim 27 wherein said server further comprises:
2 a first storage buffer in communication with said resource
3 manager,
4 wherein said server stores output data generated by an application in said
5 first storage buffer in response to said notification.
- 1 31. The server of claim 30 wherein said server transmits said output data stored in
2 said storage buffer to said external client in response to a subsequent notification
3 of change of activity.
- 1 32. The server of claim 27 wherein said server further comprises:
2 a storage buffer in communication with said resource manager,
3 wherein said server stores the state of said at least one allocated resource
4 in said storage buffer , such that when subsequent notification is received in
5 response to a change of activity, resumption occurs at substantially said same
6 state.
- 1 33. The server of claim 27 wherein said server further comprises:
2 a server display generator in communication with said resource
3 manager,
4 wherein said display generator produces a display which said server
5 transmits to an external client for displaying following detection of a change in
6 the level of activity.